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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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09/854,402

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Christopher J. Goodings

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09/07/2004

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

MEEK, JACOB M

ART UNIT

PAPER NUMBER

2637

DATE MAILED: 09/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>09/854,402 | <b>Applicant(s)</b><br>GOODINGS, CHRISTOPHER J. |  |
|                              | <b>Examiner</b><br>Jacob Meek        | <b>Art Unit</b><br>2637                         |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 - 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 3, 5, 6, 8 - 14, 16, 17, 19, 20 is/are rejected.
- 7) ☒ Claim(s) 4, 7, 15 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/03-08-2002</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Figure 4, references 42 and 43. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.

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- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

2. Claims are objected to because of the following informalities: Claims section should have a heading which reads, "What is claimed", "I Claim", or "We claim."
- Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 11 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to

which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 11 describes an receiver compromised of signal processor as its only element while the specification identifies more elements. This is a single means claim and is described in the following paragraph.

A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 9 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim. "Substantially as described hereinbefore" does appear to set clear limitations as to the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 10, 12, 13 rejected under 35 U.S.C. 102(e) as being anticipated by Valio (US Patent 6,658,048).

With regard to Claim 1, Valio teaches a method of code phase tracking comprised of the steps of receiving a subject signal containing a target pseudorandom noise code (see Figure 1, Reference 15, 13, 17, 19); generating a series of signals containing early and late replica codes corresponding to the target code (See Figure 1, reference 22, 24) correlating the subject signal with the early and late replica code signals and returning respective early and late correlation values (See Figure 1, reference 12, 26); and determining the code phase error between the target code and the replica codes from a modified early-minus-late correlation function derived from the early and late correlation values (see Figure 1, reference 28), the modified early-minus-late correlation function being such that its gradient at zero code phase error is increased compared to the true early-minus-late correlation function (see Column 6, lines 41 – 56 adjusting for maximum correlation value).

With regard to Claim 2, Valio teaches a method wherein the early-minus-late correlation function is modified by modifying either the subject signal, the early and late replica code signals or the early and late correlation values prior to deriving the early-minus-late correlation function (See Figure 1, reference 28, 30, 32, 35, 34, 37, 22, 23; and Column 6, lines 10 - 46).

With regard to Claim 10, Valio teaches a receiver (see Figure 1, reference 10) comprising an antenna for receiving a subject signal containing a target pseudorandom noise code; and a signal processor (see Figure 1, reference 8) for implementing a method of code phase correlation according to claim 1. Signal input (Figure 1, reference 15) is understood to be from an antenna.

With regard to Claim 12, Valio teaches a system (receiver) with the limitations as described above in Claim 1.

With regard to Claim 13, Valio teaches a system (receiver) with the limitations as described above in Claim 2.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, 5, 6, 8, 14, 16, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valio (US Patent 6,658,048) in view of Chalmers (US Patent 5,640,416).

With regard to Claim 3, Valio teaches the limitations of claims 1 and 2 above. Valio fails to teach the reduction of at least one odd harmonic of subject signal. Chalmers teaches a downconverter and filtering technique to remove an odd harmonic (see Figures 6(a) – 6(f), column 8 lines 18 – 60). It would have been obvious to one of ordinary skill in the art to combine Chalmers' filtering techniques with Valio's invention to produce a system with improved filtering to reduce acquisition times and improve receiver performance as Chalmers

defines his device as being adaptable to many other applications (see Column 18, lines 35 – 39).

With regard to Claim 5, Valio teaches the limitations of claims 1 and 2 above. Valio fails to teach truncation for the removal of even harmonics of subject signal. Chalmers teaches a downconverter and filtering technique (see Column 16, Sequence of operations and figure 6e showing the narrowband response for the truncation of even harmonics). Motivation to combine discussed above in Claim 3.

With regard to Claim 6, Valio teaches the limitations of claims 1 and 2 above. Valio fails to teach the reduction of odd harmonics of early or late signals. Chalmers teaches a downconverter and filtering technique (see Figure 4, references 408, 414, 418 for operation of filter and tracking). Examiner understands filters to operate on early, late and prompt signals. Motivation to combine discussed above in Claim 3.

With regard to Claim 8, Valio teaches the limitations of claims 1 and 2 above. Valio fails to teach the removal of even harmonics of early or late signals. . Chalmers teaches a downconverter and filtering technique (see Column 16, Sequence of operations and figure 6e showing the narrowband response for the truncation of even harmonics). Motivation to combine discussed above in Claim 3.

With regard to claim 14, limitations as taught above in Claim 3.

With regard to claim 16, limitations as taught above in Claim 5.

With regard to claim 17, limitations as taught above in Claim 6.

With regard to claim 19, limitations as taught above in Claim 8.

7. Claim 11 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Chalmers (US Patent 5,640,416).



Chalmers teaches a receiver comprising a signal processor (see Figure 4; reference 414 and Column 7, lines 56-64) for modifying the power spectrum of a received subject signal containing a target pseudorandom noise code (see abstract) so that the power spectrum of the subject signal has either at least one odd harmonic which is reduced in size or removed (see Figure 6d); at least one even harmonic which is increased in size (see Column 11, line 55-63); or a reduced bandwidth which is truncated between harmonics so as to excise an adjacent even harmonic (see Figures 6e). Chalmers seems to teach the essentials of the claim, however, description of the shaping of the even harmonic is weak. Chalmers however does clearly describe the ability of his filter to be adapted to changing channel conditions (see Column 4, lines 52 –59). It would have been obvious to one skilled in the art to adapt Chalmers device to render a function as described by the applicant.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1 and 12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 8 of copending Application No. 09/726,760. Although the conflicting claims are not identical, they are not

patentably distinct from each other because essential operation of the two sets of claims is identical in spite of the slightly different wording of the claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Allowable Subject Matter***

9. Claims 4, 7, 15, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Meek whose telephone number is (571)272-3013. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571)272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMM

TEMESGHEN GHEBRETSINAE  
PRIMARY EXAMINER  
8/3/04